

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

| | | | |
|---|--|---|---|
| Applicant's or agent's file reference EL/2-22943 | FOR FURTHER ACTION | | see Form PCT/ISA/220 as well as, where applicable, item 5 below. |
| International application No. PCT/EP2004/051930 | International filing date (<i>day/month/year</i>) 27/08/2004 | (Earliest) Priority Date (<i>day/month/year</i>) 05/09/2003 | |
| Applicant CIBA SPECIALITY CHEMICALS HOLDING INC. | | | |
| <p>This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.</p> <p>This International Search Report consists of a total of <u>6</u> sheets.</p> <p><input checked="" type="checkbox"/> It is also accompanied by a copy of each prior art document cited in this report.</p> | | | |
| <p>1. Basis of the report</p> <p>a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.</p> <p><input type="checkbox"/> The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).</p> <p>b. <input type="checkbox"/> With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.</p> <p>2. <input checked="" type="checkbox"/> Certain claims were found unsearchable (See Box II).</p> <p>3. <input type="checkbox"/> Unity of invention is lacking (see Box III).</p> <p>4. With regard to the title,</p> <p><input checked="" type="checkbox"/> the text is approved as submitted by the applicant.</p> <p><input type="checkbox"/> the text has been established by this Authority to read as follows: _____</p> <p>5. With regard to the abstract,</p> <p><input checked="" type="checkbox"/> the text is approved as submitted by the applicant.</p> <p><input type="checkbox"/> the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.</p> <p>6. With regards to the drawings,</p> <p>a. the figure of the drawings to be published with the abstract is Figure No. _____</p> <p><input type="checkbox"/> as suggested by the applicant.</p> <p><input type="checkbox"/> as selected by this Authority, because the applicant failed to suggest a figure.</p> <p><input type="checkbox"/> as selected by this Authority, because this figure better characterizes the invention.</p> <p>b. <input checked="" type="checkbox"/> none of the figures is to be published with the abstract.</p> | | | |

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/051930A. CLASSIFICATION OF SUBJECT MATTER
IPC .7 C09K11/06 H05B33/14 H01L51/20 C07D213/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C09K H05B H01L C07D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, CHEM ABS Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|----------|---|-----------------------|
| Y | <p>KURFURST, ANTONIN ET AL: "Oligophenylene 2,4,6-triarylpyridines and analogous diaza-p-terphenyls, diaza-p-quaterphenyls and diaza-p-quinquephenyls with luminescent activity"</p> <p>COLLECTION OF CZECHOSLOVAK CHEMICAL COMMUNICATIONS, vol. 54, no. 2, 1989, pages 462-472, XP009025528</p> <p>cited in the application</p> <p>* page 462, compounds Ic,Ie,If,IIe,IIIf, page 469, Table IV *</p> <p>-----</p> <p style="text-align: center;">-/-</p> | 1-12 |

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *&* document member of the same patent family

| | |
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| Date of the actual completion of the international search 6 December 2004 | Date of mailing of the international search report 17/12/2004 |
| Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016 | Authorized officer Nemes, C |

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/051930

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|----------|--|-----------------------|
| Y | <p>DATABASE CA 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; KURFUErst, ANTONIN ET AL: "Luminophors based on bis(4,6-diarylpyridin-2-yl)-arenes and their preparation" XP002270079 retrieved from STN Database accession no. 113:31709 * abstract, structural formulas 62 and 63 * & CS 262 585 B (CZECH.) 14 March 1989 (1989-03-14)</p> <p>-----</p> <p>DATABASE CA 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; KURFUErst, ANTONIN ET AL: "Luminophors containing 2-biphenyl-4-yl- and 5-phenyl-1,3,4- oxadiazole derivatives of 2,4,6-triarylpyridines and their preparation" XP002270080 retrieved from STN Database accession no. 113:31708 cited in the application * abstract, structural formula 64 * & CS 262 586 B (CZECH.) 14 March 1989 (1989-03-14)</p> <p>-----</p> <p>EP 1 202 608 A (TOYODA CHUO KENKYUSHO KK) 2 May 2002 (2002-05-02) cited in the application * page 11, line 44 through page 13, line 53, especially compound a6 *</p> <p>-----</p> | 1-12 |
| Y | | 1-12 |
| Y | | 1-12 |

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box II.2

Claims Nos.: -

Present claims 1-12 relate to an extremely large number of possible compounds/devices. Support within the meaning of Article 6 PCT and disclosure within the meaning of Article 5 PCT is to be found, however, for only a very small proportion of the compounds/devices claimed. In the present case, the claims so lack support, and the application so lacks disclosure, that a meaningful search over the whole of the claimed scope is impossible. Consequently, the search has been restricted to those parts of the claims which appear to be supported and disclosed, namely to the specific compounds listed at pages 24-30 of the description and to electroluminescent devices comprising said compounds

The applicant's attention is drawn to the fact that claims relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure. If the application proceeds into the regional phase before the EPO, the applicant is reminded that a search may be carried out during examination before the EPO (see EPO Guideline C-VI, 8.5), should the problems which led to the Article 17(2) declaration be overcome.

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International application No.
PCT/EP2004/051930

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. Claims Nos.: because they relate to subject matter not required to be searched by this Authority, namely:

2. Claims Nos.: because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
see FURTHER INFORMATION sheet PCT/ISA/210

3. Claims Nos.: because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.

2. As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.

3. As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:

4. No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/EP2004/051930

| Patent document cited in search report | Publication date | | Patent family member(s) | | Publication date |
|--|------------------|------------|-------------------------|----------------------------|--------------------------|
| CS 262585 | B | 16-08-1988 | CS | 8709348 A1 | 16-08-1988 |
| CS 262586 | B | 16-08-1988 | CS | 8709349 A1 | 16-08-1988 |
| EP 1202608 | A | 02-05-2002 | EP JP | 1202608 A2 2002203683 A | 02-05-2002 19-07-2002 |